Glasgow. Black was made professor in 1756, when he was twenty-eight, and remained here until he was translated to Edinburgh ten years later. Prof. R. Dundas Thomson wrote fifty years ago of Black, "These two capital discoveries"—of the loss of weight when limestone is converted into quicklime, and of the disappearance of an amount of heat which does not affect the thermometer when water is converted into steam—"have been of greater service to science than perhaps any equal number of data ever pointed out by philosophers. Dr. Black was a man of elegance, modesty, and indolence. His active life in science terminated in his thirty-eighth year, for after his removal to Edinburgh, he engaged in no inquiries, and contented himself with teaching the science." Some scientific men may look back with regretful eyes to the far-off Arcadia of their great predecessor—who had two epoch-making discoveries to his credit before he was thirty-eight, and nothing but quiet though admirable teaching to do for the balance of his days. Mendeléeff at seventy, and Lord Kelvin at eighty, are still incessantly at work on the most abstruse and far-reaching problems of the intimate constitution of the world. Dr. Black's incisive critic might have remembered that it has been given to very few men of science to take an unchallenged place both among the first investigators and the most accomplished and successful teachers of his time.

Wandering, after the lecture, about the university, which our predecessors in 1870 thought to have been housed so splendidly, one finds Sir Gilbert Scott's great central building surrounded by masses of modern additions. There is a huge engineering building which cost about 30,000*l.*, a botany building costing about 18,000*l.*, an additional anatomy building costing about 13,000*l.*, an additional surgery building costing about 10,000*l.* All these were built within the last ten years, but before the days when Dr. Carnegie stepped in like a special providence to help the Scottish universities. His benefactions are of two kinds. The first provides 50,000*l.* a year towards the payment of the fees of all students in any of the universities who ask for it and who have shown themselves qualified to profit. It was no doubt hoped that this would largely increase the number of the students, and so greatly add to the resources of the universities. The hope has hardly been realised. The number of students has not materially increased, and the universities merely receive the fees of a very large number of their students through Mr. Carnegie's trustees instead of from the parents. Many students, of course, do not ask for this benefit, but, as a very great number do, the fee money which Mr. Carnegie has provided goes, and no doubt it was to a great extent meant to go, to the relief of parents who used to pay, often, certainly, with difficulty, and it has made very little addition to the resources of the universities. It is by the second 50,000*l.* a year, destined for equipments and extensions, including buildings, that the universities have chiefly benefited. The trustees require that the university wanting new buildings for scientific teaching shall raise half the requisite money, in which case they will supply the other half. For some reason or other they have not so far helped the extensive addition—costing probably 12,000*l.* —which has just been made to the chemical department. But they are defraying half the cost of the new buildings for natural philosophy, for physiology, for medical jurisprudence and public health, and for materia medica, which are all in a state of considerable forwardness, and which will cost some 80,000*l.* The scientific world must have laboratories for practical teaching, and modern laboratories are expensive to build, and very expensive to maintain and to keep up to date. There is no more finality in scientific equipment and apparatus than in ironclads, and many things which are imperious necessities of to-day will be historic scrap iron after a dozen years. These vast laboratory extensions will be useless without great additions to the staff, and the universities will have to look not merely to the Carnegie trustees, but to the general public for further advances towards maintenance and renewal of equipment. Scientific students in Glasgow and elsewhere ought in the future to be taught more practically, but it is by no means certain that their numbers will be greatly increased. It is certain that there are many non-scientific departments which will need extensions, and cannot look to the Carnegie trustees.

I have perhaps wandered a little from the commemoration, but it is in these visible extensions actually or prospectively completed within ten years through the benevolence of Glasgow donors and the generous help of the Carnegie trustees that scientific graduates and visitors have taken the greatest interest. After their look round, they betook themselves to the Hunterian Museum, where a medallion bust of the late Prof. John Young, who was its *genius loci* for thirty-six years, was unveiled. No archæologist, numismatist, zoologist or geologist can be ignorant of his name and work. "Those who knew him best," says his life-long friend and comrade, Dr. Yellowlees, "know that they will never see another John Young."

The commemoration day is now over. It included the ceremony of conferring honorary degrees, six D.D.'s and eight LL.D.'s, including Mr. Choate, the American Ambassador, and—*in absentia*—Prof. Mendeléeff, the great Russian chemist, perhaps the foremost man in modern chemistry, and the fittest to connect the chemists of this generation with the brilliant young Glasgow professor of a century and a half ago whom the great Lavoisier was proud to acknowledge as his teacher. Mention must, however, be made of the banquet in honour of Sir William Ramsay, whose Glasgow degree is not of yesterday, and of the honorary graduates of to-day. But banquets are, after all, very much alike. W. J.

THE CELEBRATION OF SIR HENRY ROSCOE'S GRADUATION JUBILEE.

THE half-century which has elapsed since Sir Henry Roscoe graduated as doctor of philosophy at Heidelberg has been devoted by him uninterruptedly to the furtherance of science and education.

As professor of chemistry for thirty years at Owens College, he succeeded by his teaching, writings and researches in establishing a great school of chemistry, besides earning a world-wide reputation as a scientific man; as member of Parliament he assisted to lay the foundations of a scientific system of technical education; and as Vice-Chancellor of the University of London and a member of the Carnegie trust and other bodies, he has spent his later years in the organisation of scientific teaching. It was therefore fitting that at the celebration of his graduation jubilee he should be greeted by addresses from his old students and from universities, colleges, and learned societies, both at home and abroad, which bore eloquent testimony to the intense appreciation which is felt for his services to the cause of scientific and educational progress.

The ceremony took place on Friday last, April 22, at Manchester, in the Whitworth Hall of the Owens College, which, by its great architectural beauty, sets a fitting seal on the splendid group of buildings which Sir Henry Roscoe has seen grow up to replace the old house in Quay Street in which his first classes were held.

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The philosophical faculty of the University of Heidelberg marked its sense of the importance of the occasion by renewing the diploma of doctor of philosophy granted half a century ago, and addresses were also presented from the Victoria University of Manchester, the old students, the universities of London, Cambridge, Liverpool, Birmingham, Edinburgh, Glasgow, Aberdeen, St. Andrews, and Montreal, University College, London, Yorkshire College, King's College, London, University College, Sheffield, Durham College of Science, University College, Dundee; Royal Society, British Association, Literary and Philosophical Society of Manchester, Chemical Society, Society of Chemical Industry, German Chemical Society, Bunsen Gesellschaft, Physikal. Verein, Frankfort, Kön. Gesellschaft, Göttingen, Pasteur Institute, Lister Institute, Owens College Chemical Society, Chemical Society of Rome, the Dutch Chemists, American Academy, American Philosophical Society, and American Chemical Society.

A large number of personal congratulations were also received from scientific men all over the world. To each of the addresses a separate reply was made, and in these concise and pointed speeches, each embodying some fresh line of thought, the audience was delighted to recognise the best possible proof of the continued mental and physical vigour of the speaker.

SIR CLEMENT LE NEVE FOSTER, F.R.S.

THE tidings of the death of Sir Clement Le Neve Foster on April 19 brought to a wide circle of friends a great shock as well as sincere sorrow, for all hoped that he might enjoy for many years the final stage of an active and honoured career. His death is a serious blow to the public service to which his life was devoted.

Born at Camberwell on March 23, 1841, he was the second son of the late Peter Le Neve Foster, who for a quarter of a century was secretary of the Society of Arts. He received his preliminary education at Boulogne-sur-Mer, and obtained his degree of Bachelor of Science of the University of France at the age of sixteen. In 1857 he entered the Royal School of Mines, and in two years achieved the remarkable distinction of securing the associateship in the mining, metallurgical and geological divisions, as well as the Duke of Cornwall's scholarship and the Edward Forbes medal. He then proceeded to the mining college of Freiberg, in Saxony, which at that time was supreme in its special field. In 1860 he received from Sir Roderick Murchison an appointment on the Geological Survey, and for five years was engaged in mapping the Wealden beds of Kent and Sussex, and the Carboniferous rocks of Derbyshire and Yorkshire.

In 1872 Le Neve Foster was appointed H.M. Inspector of Mines. The new Metalliferous Mines Regulation Act, which had just been passed, was received with a certain amount of disfavour by the Cornish miners, and the work of the first inspector was particularly difficult. The severity of which Le Neve Foster was sometimes accused bore, however, remarkable fruit. The average death rate from mine accidents in his district was reduced from 2 per 1000 during the first three years of his inspectorship to 1·3 per 1000 during the last five. In 1880 he was transferred at his own request to the North Wales district, where he remained until his retirement in 1901. His twenty-nine annual official reports afford clear evidence of the mass of work that he got through, and indicate the many ways in which the laws for the regulation of mines have been improved in consequence of his efforts. In 1890 he was, on the death of Sir Warington Smyth, appointed professor of mining at the Royal College of Science and Royal School of Mines, and continued to hold that appointment until his death. He largely improved the system of instruction, and insisted upon adequate attention being given to practical training.

He was a frequent contributor to the *Proceedings* of the many scientific societies of which he was a member, and in spite of the exigencies of his official appointments he found time for literary work. He published in 1867 a translation from the Dutch of P. van Diest's book on the tin deposits of Banca, and in 1876, with Mr. W. Galloway, he translated from the French Callon's "Lectures on Mining." He also wrote the article on mining in the "Encyclopædia Britannica." In 1894 he published his great work on "Ore and Stone Mining," the first systematic English treatise on the subject, of which the fifth edition has just been issued; and at the beginning of this year he published a smaller volume on "Mining and Quarrying," noticed in this issue of NATURE (p. 603).

In 1895 Le Neve Foster issued his first annual report upon the mineral industry. This formed an entirely new departure in official literature, and embodied the results of a vast amount of labour and technical skill in comparing the mineral industries of the United Kingdom with those of other countries. Its value was so much appreciated that his services as editor were retained by the Home Office after his retirement from the post of inspector.

Sir Clement was elected a fellow of the Royal Society in 1893. He was a juror at the Paris Exhibitions of 1867, 1878, 1889 and 1900, and was created a Knight of the Legion of Honour in 1889. He also acted as juror at the Inventions Exhibition in 1885, and at various other less important exhibitions. He served upon various departmental committees on mineral statistics, open quarries, slate mines, and explosives in mines, as well as upon the Royal Commissions for the Chicago Exhibition and for the St. Louis Exhibition. His faithful and long continued services to the public weal were officially recognised by the knighthood conferred upon him on the King's birthday last year.

No man in this, or perhaps in any other, country has rendered more conspicuous services to metalliferous mining than Le Neve Foster did. In his twenty-nine years of Government mine inspection he did much to ameliorate the lot of the miner, and by his teaching and writings he secured for metal mining, that had previously been practised mostly as an empirical art, a scientific basis.

B. H. B.

A large number of men of science attended the funeral of Sir Clement Le Neve Foster on Friday last, among them being the following representatives of scientific societies and other bodies:—Sir Norman Lockyer, president of the British Association; Sir George Armytage, Sir W. T. Lewis, and Prof. Hull, representing the Royal Commission on Coal Supplies; Prof. J. W. Judd, F.R.S., Dean of the Royal College of Science, and Mr. J. J. H. Teall, F.R.S., Director-General of the Geological Survey of the United Kingdom, representing the Royal Society; Mr. H. B. Woodward, representing the Geological Society; Mr. H. Jennings and Mr. Charles McDermid, representing the Institution of Mining and Metallurgy; Mr. Aubrey Strahan, representing His Majesty's Geological Survey, and Mr. Morant's private secretary, representing the permanent secretary of the Board of Education. The Royal College of Science and the Royal School of Mines were represented by the council and some of the students.

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